

Factors influencing Prevention of Mother to Child Transmission (PMTCT) outcomes in the Rundu District of Namibia

By

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DECLARATION

By submitting this assignment electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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ABSTRACT

Introduction: In Namibia, according to the National Sentinel Serosurvey 2012, the HIV prevalence among pregnant women attending antenatal clinic has increased from 4.2% in 1992 to 18.2% in 2012. A high HIV prevalence in women of reproductive age thus exists in Namibia and as a result the risk of vertical transmission of HIV from infected mothers to their new born is also high. Without any interventions, about 20-45% of exposed children will be infected with HIV. With an effective Prevention of Mother to Child Prevention (PMTCT) programme, the risk can be reduced to as little as 2%. Despite the international and national efforts to try to implement such interventions, some gaps and barriers still exist in many sub-Saharan Africa countries, including Namibia, posing a challenge to PMTCT programme roll out. This study attempts to identify these gaps and barriers in the Rundu district of Namibia, which has an HIV prevalence of 24.5%.

Methodology: A qualitative study was done using the face to face interviews. The target population consisted of health care workers providing PMTCT and ART services at selected health facilities in the Rundu district.

Findings and Recommendation: The study participants were very experienced in delivering PMTCT services and the majority has been working on the programme for more than five years. Some of the challenges identified include home deliveries, lack of male involvement and stigma surrounding HIV/AIDS and formula feeding. The main reasons associated with these challenges include lack of knowledge, cultural beliefs as well as poverty. Respondents also felt there is a lack of staff to attend to the high patient load experienced at their health facilities and that current staff should be re-trained more often. It was recommended that PMTCT programme strategies should be improved by putting measures in place to increase awareness around HIV/AIDS and PMTCT issues identified in this study.

OPSOMMING

Inleiding:

In Namibië het die MIV-voorkoms onder verwagterende vroue wat nageboorte-klinieke besoek het, volgens 2012 se National Sentinel Serosurvey, in 1992-2012 van 4.2% tot 18.2% gestyg. Daar is dus 'n hoë MIV-voorkoms onder vroue in die reprodutiewe ouderdomsgroep in Namibië en die risiko van vertikale oordrag van MIV vanaf geïnfekteerde ma's na hul pasgeborenes is gevolglik ook hoog. Sonder ingryping sal sowat 20-45% van die blootgestelde kinders ook MIV-geïnfekteer word. Doeltreffende PMTCT-programme kan dié risiko tot slegs 2% verminder. Ondanks die internasionale en nasionale pogings tot sulke tussentredes bestaan daar steeds tekortkominge en struikelblokke in vele Afrikalande suid van die Sahara, insluitend Namibië, wat 'n uitdaging bied om PMTCT-programme hier ingestel te kry. Dié studie poog om sulke tekortkominge en struikelblokke te identifiseer in die Rundu-distrik, Namibië, met sy MIV-voorkoms van 24.5%.

Metodologie: 'n Kwalitatiewe studie is gedoen, wat die gesig-tot-gesig-onderhoude gebruik het. Die teikenbevolking was gesondheidsorg-werkers wat PMTCT- en ART-dienste by uitgesoekte gesondheidsorg-geriewe in die Rundu-distrik aanbied.

Bevindings en aanbevelings: Die deelnemers aan die studie was goed vertrou met PMTCT-dienslewering en het meestal meer as vyf jaar met dié program gewerk. Onder die uitgekende uitdagings is tuisaflewering, die gebrek aan mans se betrokkenheid en die stigma rondom MIV/Vigs en formule-voeding. Die redes hiervoor hou meestal verband met onkunde, kultuurgelowe en armoede. Respondente het ook gemeen die personeel is onvoldoende vir die hoë pasiënt-ladings by hul gesondheidsorg-fasiliteite en dat die huidige personeel meer gereeld heropgelei moet word. Die instel van maatreëls vir beter programstrategieë rakende PMTCT is voorgestel, om groter bewuswording te bevorder rondom die MIV/Vigs- en PMTCT-kwessies wat in dié studie geïdentifiseer is.

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Chapter 1: INTRODUCTION

1.1 Background and Rationale of the Study

Worldwide, approximately 39.5 million people are living with HIV/AIDS, including an estimated 17.7 million women and 2.3 million children under the age of 15. Women currently represent the population which reflects the fastest increase in HIV infection rates; in the hardest hit countries of sub-Saharan Africa, more than 60% of all new HIV infections are occurring in women, infants, and young children with 1 400 children under the age of 15 being infected with HIV every day. In 2005 alone, an estimated 540 000 children were newly infected with HIV, with approximately 90% of these infections occurring in sub-Saharan Africa. Without appropriate care and treatment, more than 50% of newly infected children will die before their second birthday (WHO, 2007).

Approximately 90% of HIV infection among children is acquired through mother to child transmission of HIV (MTCT). Transmission from an HIV-positive pregnant woman to her child can occur during pregnancy, labour and delivery, or through breastfeeding (MOHSS, 2008). The risk of MTCT can be reduced to less than 2% with a package of evidence-based interventions including ARV prophylaxis and treatments combined with elective caesarean section and avoidance of breastfeeding. Infant feeding patterns are a very important determinant of MTCT. For mothers using replacement feeding there is obviously no transmission through breastfeeding (WHO, 2007). Breastfeeding during a period of 6 months leads to approximately 10% extra transmission (from 20% to 30%), while breastfeeding during a period of 18-24 months leads to approximately 17.5% extra transmission (from 20% to 37.5%), compared to no breastfeeding (De Cock et al, 2000).

In Namibia, according to the National Sentinel Serosurvey 2006, the prevalence of HIV among pregnant women has increased from 4.2% in 1992 to 19.9% in 2006. The estimated number of pregnant women in 2006 was 64,134. Given the ANC HIV prevalence rate of (19.9%), an estimated 12,634 pregnant women were therefore infected with HIV. Without any intervention it is estimated that about a third, or 4,211 babies born to these mothers, would be infected with HIV. In the absence of interventions, the risk of MTCT ranges from 15-30% in non-breastfeeding populations. In breastfeeding populations, such as in Namibia, the risk increases to 20-45% (MOHSS, 2008). In a more recent survey, the newspaper, *The Namibian* (2013) reported that the National HIV sentinel survey conducted in 2012 showed that the overall national prevalence rate among pregnant women attending antenatal clinic was 18.2%. Prevalence among specific sites varied considerably. High prevalence sites include Oshikuku (27%), Onandjokwe (25.7%), Rundu (24.5%) and Katima Mulilo (37.7%). The sites with the lowest prevalence rates were Windhoek Central Hospital (9.6%), Rehoboth (9.8%), Opuwo (9.8%), Gobabis (9.9%) and Okakarara (9.9%).

In September 2005, WHO member states attended a UN summit where members (including Namibia) reaffirmed their commitment to fully implement all goals contained in the 2001 United Nations General Assembly Special Session on HIV/AIDS (UNGASS) Declaration of Commitment, which included reducing the proportion of infants infected with HIV by 50% by 2010. In December 2005, the Prevention of Mother to Child Transmission (PMTCT) High Level Global Partners Forum in Abuja, Nigeria, issued a Call to Action “Towards an HIV and AIDS Free Generation”. The Call to Action expresses the political will and commitment of national governments and stakeholders to work together towards the goal of eliminating HIV infection in infants and young children, which will lead to a worldwide HIV/AIDS free generation. The implication of this commitment was that governments – including that of Namibia – with support from development partners, must accelerate the provision of PMTCT services, including use of more efficacious regimens for PMTCT, and furthermore, establish efficient monitoring and evaluation systems for tracking progress in the elimination of HIV transmission to infants and young children (MOHSS, 2008). Based on the most recent PMTCT statistics presented here, it appears that Namibia is still facing some challenges and barriers in achieving the goals and commitments set at UNGASS and the Global Partners Forum in 2005.

Some of the reasons why the said goals and commitments were not reached in Namibia may have to do with the different structural and socio-cultural factors that have been found to influence PMTCT outcomes. According to Health Bridge (2007) and Karia (2008), some of the identified gaps were mainly due to structural and socio-cultural factors, such as the following:

- Inadequate counselling (specifically about breastfeeding) has been noted from some studies as a cause for dropout at different delivery points in the PMTCT protocol;
- For pregnant women who come for a first visit to antenatal care (ANC), not all are counselled for HIV;
- Among those that are counselled not all get tested;
- For those who tested, not all receive their test results;
- For those found to be HIV positive some may not being evaluated for HAART or AZT eligibility and their monitoring;
- Some infants also may not receive the Nevirapine prophylaxis and some also may end up not being tested for DNA/PCR, as well as receiving Cotrimoxazole prophylaxis;
- Minimal or no involvement of men;
- Programmes focus too much on HIV-infected women and not on men;
- Men do not attend ANC;
- Men do not comply with protection measures such as using condoms;

- Many spouses of HIV-positive women refuse testing;
- Home delivery: Women attend ANC and MCH clinics but many deliver at home and therefore it is difficult to ensure and establish that drugs provided were taken;
- Compliance and follow-up: Some positive mothers refuse the AZT pill and many HIV-negative women do not go for a confirmatory test.

The researcher, who works at the ART Clinic in Rundu and has been dealing with HIV treatment and care (including paediatric HIV/AIDS and ART medications), observed that despite the country implementation of PMTCT programmes, it seems that the abovementioned structural and socio-cultural factors are major challenges in achieving the UNAIDS vision aimed at zero new HIV infections, zero discrimination, and zero AIDS-related deaths in Namibia. In order to achieve this vision, more effective PMTCT programmes are needed, and addressing the factors influencing the PMTCT outcomes are of paramount importance – in order to clear the gaps and also for proper prevention of MTCT of HIV. This research project will therefore focus on exploring the structural and socio-cultural factors that influence PMTCT outcomes, focussing specifically on the Rundu district.

1.2 Research Problem

Currently a high prevalence of HIV (high prevalence of HIV in women of reproductive age) exists in the Rundu district, and as a result the risk of vertical transmission of HIV from infected mothers to their new born is also high. As far as could be ascertained, no specific study has been done in this area (or Namibia at large) that investigates if structural and/or socio-economic factors are weakening PMTCT programmes.

1.3 Research Question

Do structural and/or socio-cultural factors influence PMTCT outcomes in the Rundu district of Namibia? And if so, which structural and/or socio-cultural factors influence PMTCT outcomes in the Rundu district?

1.4 Aim of the Study

To identify if structural and socio-cultural factors influence PMTCT outcomes in the Rundu district in order to provide guidance for PMTCT programme, better options of dealing with PMTCT related challenges and barriers, and at the end reducing the prevalence of vertical HIV transmission.

1.5 Study Objectives

- To identify the patient and community socio-cultural factors influencing the PMTCT outcomes in the Rundu district;

- To ascertain hospital and clinics' structural factors which contribute to PMTCT outcomes in the Rundu district;
- To analyse if the available PMTCT services are supporting the existing socio-cultural and structural PMTCT factors;
- To provide guidance for better provision of PMTCT services and note what could be done to reduce aforementioned PMTCT barriers in the district and country as a whole.

1.6 Significance of the Study

The study could assist health care workers to learn of a better way of providing PMTCT services and improved ways of dealing with PMTCT factors/challenges. Moreover, the outcome of the research project could aid the understanding of hospitals and the clinics' staff on how PMTCT services could address and accommodate the socio-cultural and structural PMTCT challenges faced during their service delivery.

Most importantly, however, it could assist in proffering appropriate recommendations or suggestions to the Ministry of Health and Social Services' policy makers on how PMTCT programme could be improved. Lastly, the donors and NGOs could gain awareness of the areas where more support is needed in order to improve PMTCT services.

Chapter 2: LITERATURE REVIEW

2.1 Introduction

The literature review is divided into two parts. Part one will briefly encapsulate a general overview of HIV/AIDS in Namibia while part two will look at the factors influencing the PMTCT outcomes. Various studies done in Namibia, sub-Saharan African and elsewhere will be reviewed concerning prevention of mother to child Transmission (PMTCT) of HIV. A statement on the need for further research will form the last part of this chapter which will also include a summary of a literature review outlining the PMTCT factors forming the basis of this study.

2.2 HIV/AIDS and PMTCT in Namibia

The Namibia Ministry of Health and Social Services (MOHSS) firstly introduced PMTCT services in the Katutura and Oshakati State hospitals and later on the service was disseminated country wide including all 35 State and Church hospitals and to 153 health facilities and clinics in the public sector (MOHSS, 2008). Generally in Namibia, the PMTCT implementation coverage is high – 90% coverage of all health facilities, 94% HIV testing uptake coverage, 70% ARV prophylaxis coverage, 95% infant ARV prophylaxis coverage and 11% vertical transmission rate (Agu, 2009).

PMTCT programmes in Namibia include HIV counselling and testing, referral to HIV care/treatment for those found positive, provision of prophylactic ARV medication to HIV positive mothers before delivery and for infants within 72 hours of birth, infant feeding counselling and DNA polymerase chain reaction (PCR) testing for infants born to HIV positive mothers (Agu, 2009).

The HIV status of infants born to HIV positive mothers are detected as early as 6 weeks after birth using the polymerase chain reaction (PCR) test which was introduced by the MOHSS in collaboration with partners towards the end of 2005. The test can reliably and accurately detect HIV DNA on a dried blood spot (DBS) specimen. The early infant diagnosis has been improved due to the DNA/PCR test and can subsequently lead to early referral of HIV infected infants for appropriate care and treatment and this reduces the morbidity and mortality of HIV positive infants/children. Without any intervention, statistics show, 30% of HIV infected children will die in the first year of life and 50% would be dead by the second year (MOHSS, 2008).

2.3 Factors affecting PMTCT outcomes

Generally, as documented by Health Bridge (2007), the PMTCT factors affecting many African countries include: home delivery, involvement of males, compliance to taking ARV's and prophylaxis and follow-up, stigma and feeding choices, costs and drug

availability, human resources and health system factors – and PMTCT data management.

The Namibia PMTCT country report which was compiled by Agu (2009) outlined the key implementation challenges to scaling up PMTCT programme. Some of the key challenges included factors such as the lack of male involvement, shortages of staff and neglected follow-up after delivery for both mother and baby. Infant feeding poses another challenge as little is known what will happen when the mother leaves the health facility. Training and retraining of health care workers, is another challenge as they are continuously on the move in search of careers. Also there is a weak link when it comes to comprehensive care for mother and baby, children and partner. Sometimes it is difficult to tell that if someone tests positive at ANC they will end up at ART clinic after being referred and also at times there are great distances between ANC and ART clinics and people must travel to an ART clinic – and some may not go due to affordability. It was also documented in this report that from 62,000 expected pregnancies each year in Namibia only 55,000 of them attend ANC and about 7,000 pregnant mothers are not captured.

The abovementioned factors will be elaborated on below and will form the basis of what will be further explored as part of the proposed study.

2.3.1 Home Delivery

Some studies done showed that many women attend antenatal (ANC) and also MCH clinics during pregnancies but still many deliver at home and so is difficult to ensure that drugs provided were really taken. Health Bridge (2007) has been analysing the challenges in the prevention of Mother to child transmission of HIV in Africa. Its report documented some findings from Cameroon which showed that the ANC prevalence of HIV was 22% but that of the delivery room was only 8.7% indicating that a large number of deliveries have been conducted at home with many HIV-positive women not delivering at the hospital. With home deliveries mothers missed out on their drugs which are supposed to be taken during labour and after delivery, children are brought late or completely miss the Nevirapine (NVP) prophylaxis syrup, which is recommended 72 hours post-delivery (Health Bridge, 2007).

A study done in rural Malawi by Kasenga (2007) which investigated the home deliveries and consequent implications for adherence to Nevirapine in a PMTCT programme. The study was following the women in a PMTCT programme till delivery for adherence assessment to NVP prophylaxis tablets and syrup. The study found that 75 HIV positive women were registered in the PMTCT programmes, 40 women (53%) delivered in the hospital and 35 (47%) did not – 27 (77.2%) of them were traced to their homes. This study showed that all women who delivered at a hospital had taken their NVP tablets

and their babies had received NVP syrup – except one baby who died soon after delivery. Of those who delivered at home and were traced 16 (59.3%) had access to NVP and had taken their tablets during labour but none of their babies was taken back to health facilities for NVP syrup. Common reasons for not delivering in a hospital were lack of money (66.6%), distance (45%) and illness (22.2%).

Also another study was done in Uganda and documented by Irin (2008) who was investigating if home births hamper the PMTCT programme. The study showed that even if the majority of HIV positive pregnant women have access to a hospital and PMTCT services, still about 60 to 70 percent of pregnant mothers deliver at home. As a consequence it is difficult to administer the ARV's medications which have to be taken by both mother and child.

Koye (2013) conducted a study which investigated predictors of mother to child transmission of HIV among HIV-exposed infants at a PMTCT Clinic in North West Ethiopia. The study came up with findings which showed home delivery as one of the predictors for mother to child HIV transmission. Other factors were absence of maternal PMTCT interventions, mixed infant feeding, rural residency and late enrolment of exposed infants to a clinic.

Shah, et al (2007) conducted a study in Pakistan. The study investigated the home deliveries, reasons and adverse outcomes in women presenting to a tertiary care hospital. Findings of the study showed that 65 % of deliveries were conducted at home. The most frequent reason stated by 57% of women for not delivering in a facility, was the belief that it was not necessary. The next most common reason stated by 38% of women was that it costs too much.

2.3.2 Involvement of males

Health Bridge (2007) reported that many health facilities implementing PMTCT programmes do not focus on involving men in these activities. This has led to poor communication between spouses as far as disclosure of HIV status is concerned. The lack of male involvement in Antenatal Care (ANC) services and the fact that they do not receive counselling on HIV has been found to be one of the reasons why men do not comply with protection measures (such as condoms) and many refuse HIV testing.

Averting HIV and AIDS or Avert (undated) from its report on PMTCT in practice, documented findings from a study done in Kenya by Irin (2009) who investigated whether men accompanying their partners had any significant influence on attendance levels. The study showed that when women are supported and accompanied by their spouses, it improved their clinic attendance levels.

Reports by WHO, UNAIDS & UNICEF (2011) related to HIV/AIDS epidemic updates and the health sector's progress towards universal access, show that if couples are attending ANC and PMTCT services and have been counselled and tested together, there is less potential for blame and discrimination among themselves.

Studies by Semrau in 2005 (investigating the likelihood of women in couples antenatal HIV counselling and testing to report adverse social events) and Farquhar in 2004 (who assessed if antenatal couple counselling increases uptake of interventions to prevent HIV-1 transmission) found that the involvement of men can promote the use of PMTCTC services such as complying to condom use and prevention of re-infection, taking of ARV's and prophylaxis, as well as assisting with better breastfeeding methods.

Another study conducted in Kenya by Aluisio, et al (2011) which investigated if male antenatal attendance and HIV testing were associated with decreased infant HIV infection and increased infant survival without HIV infection found that when the man has been involved in the PMTCT programmes the risk of vertical transmission was decreased by 40%.

Nuwagaba et al (2007) conducted a study on the challenges faced by health workers in implementing the Prevention of Mother to Child HIV Transmission (PMTCT) programmes in Uganda and found that women were facing certain difficulties in disclosing their HIV status to their partners. The study further noted that the finding was due to lack of male partner involvement in the PMTCT activities. The non-disclosure of the HIV status to the partner created a services problem in family planning, and also in some instances one partner had started ARV's without informing the other. The result of women not disclosing their HIV status to their spouses leads to loss of follow-up, as they do not wish to be traced to their houses and their community.

Secka (2010) conducted a study in Gambia which investigated male involvement in care and support during pregnancy and childbirth. The study showed that there are certain reasons why men don't escort their partners to a clinic. Some of the reasons were due to men's job responsibilities, long waiting times at the clinic, the large age difference between husband and wife – in many instances old men marry younger girls and then feel ashamed to escort them to the clinic.

2.3.3 Compliances and follow-up

UNICEF (2009), in a briefing paper about scaling up early infant diagnosis and linkages to care and treatment state, found that compliances to medications and clinic follow-up can prevent/avoid postpartum HIV transmission and improve the overall infant outcomes. The follow-up of HIV exposed children is important for early diagnosis of HIV infection and timely enrolling in care and initiation of ARV's medications being administered to infected children.

Another important benefit of compliances and PMTCT follow-up is to ensure a referral to community based psychosocial support and home based care services. Perez et al, (2004) highlighted this benefit in the report on the implementation of a rural programme of prevention of mother to child transmission of HIV in Zimbabwe at the first 18 months of experience.

Braun et al (2011) checked if inadequate coordination of maternal and infant HIV services could detrimentally affect early infant diagnosis outcomes in Malawi, and Stringer et al (2008) investigated the monitoring effectiveness of programmes to prevent mother to child HIV transmission in lower income countries. Their study findings showed that failure to comply with ARV's medications and prophylaxis as well as follow-up to clinic visits for medication resupply and other PMTCT and MCH (Maternal and Child Health) services disrupt the interventions in eliminating paediatric HIV. They explained that this barrier results in eliminating the opportunity to prevent early HIV transmission during labour and delivery as well as late transmission (through breastfeeding). Also it disrupts early HIV diagnosis in infants and thus prevents associated morbidity and mortality.

Also a study done in Nigeria by Rawizza, Meloni, Oyebode et al (2012) on their evaluation of loss to follow-up within the prevention of mother to child transmission care cascade in a large ART programme, showed that among 19,303 women entering PMTCT care during the antenatal period only 10 078 (52%) completed the entire cascade of services, including prenatal care, delivery and at least one infant's follow-up visit. The study showed that the greatest loss in the PMTCT care cascade occurred before infant follow-up with 31% of women lost to follow-up after receiving delivery care. Also amongst the mothers who received some antenatal care, infant outcomes were unknown for 45%.

Kalembo & Zgambo (2012) in their study investigated the loss to follow-up and they found it to be a major challenge to successful implementation of prevention of mother to child Transmission of HIV-1 programmes in sub-Saharan Africa. In this study they also found that the high attrition within PMTCT programmes are likely to be more lost to follow-up (LTFU) than mortality. The cumulative loss to follow-up in sub-Saharan Africa PMTCT programmes are estimated between 20-28% during antenatal care, up to 70% after four months after delivery and close to 81% at six months after delivery. These findings were also documented in their reports by UNAIDS (2010) and WHO (2011).

Another study which documented similar findings was done by Painter, et al (2005) – this study investigated the socio-demographic factors associated with participation by HIV positive pregnant women in an intervention to prevent mother to child transmission of HIV in Côte d'Ivoire. The study showed that a large number of patients was lost to follow-up.

Findings from a study done in Uganda by Guay, et al (1999) which compared the single-dose nevirapine to zidovudine for prevention of mother to child transmission of HIV-1, showed that compliances to PMTCT follow-up ensured receiving the full ARV's for eligible mothers and short course antiretroviral treatment to other HIV positive mothers and their exposed infants.

Also another study conducted by Badri, et al (2001) which investigated initiating cotrimoxazole prophylaxis in HIV-infected patients in Africa, showed the importance of compliance to follow-up. Pregnant mothers who comply with their follow-up appointments also received counselling for exclusive breastfeeding for 6 months or making use of bottle feeding, provision of prophylaxis, e.g. cotrimoxazole for mother and her infant(s).

The study which was done in South Africa by Miller, et al (2010) investigated the reasons for loss of follow-up for antiretroviral patients. Study findings showed that there were certain serious barriers which put treatment out of reach. Treatment barriers included transportation costs, time needed for taking of medications and logistical problems. Other less influential barriers were found to be HIV/AIDS related stigma and medication side effects.

2.3.4 Stigma and Feeding Choices

Health Bridge (2007) analysed the challenges in the prevention of Mother to child transmission of HIV in Africa and in its report documented some findings from Malawi. It showed that stigma and discrimination is still high in the community and many viewed ones with HIV/AIDS as having received a death sentence. It was pointed out that some women who can afford formula feeding still decided to continue breastfeeding so as to avoid being stigmatized. As a result the rate of acceptance of formula feed is very low (<30%) amongst women who received PMTCT treatment in Malawi.

Nuwagaba, et al (2007) in their study which investigated the challenges faced by health workers in implementing the Prevention of Mother to Child HIV Transmission (PMTCT) programmes in Uganda; found that the major challenge in dealing with the women was advice on breastfeeding. The researcher noted that it is not only the mother who can decide and choose the mode of infant feeding but the entire family has to have a say. Due to non-disclosure of HIV status and fear of stigmatization women tend to breastfeed their children much longer than recommended.

It was also noted from other studies done by Doherty, et al (2006) while investigating the effect of the HIV epidemic on infant feeding in South Africa, and Sprague, et al (2011) who investigated if the health system weakness constrained access to PMTCT and maternal HIV services in South Africa – their findings showed that tins used for formula feeding were associated with stigma. The interviewed women were hiding their

HIV status by stating that their babies did not like breast milk or they placed formula milk in other containers which were not of their origins.

2.3.5 Drug Availability

Rujumba, et al (2012) conducted a study in Eastern Uganda aimed at listening to health workers and gaining lessons for strengthening the programme for the prevention of mother to child transmission of HIV. They noticed that there was no consistency of drugs supply to the facilities and hence another challenge for running the PMTCT programme had cropped up. As a consequence some of the study sites reported running out of test kits and nevirapine for mothers and babies. Other sites even decided to refer the needy mothers to the larger centres and hospitals where drugs were more readily available. Generally the whole process of going to one clinic and then being referred to another large centre or hospital became very costly for women and their families.

2.3.6 Human Resources and PMTCT Data Management

Findings from the study done in Eastern Uganda by Rujumba, et al (2012) – while listening to the health workers on ways of strengthening the PMTCT programme – showed that many health workers interviewed mentioned the need of more training on PMTCT to update their own knowledge and skills. The participants emphasized the importance of continuous skill development and up-dating of health workers on the latest developments and knowledge in PMTCT and HIV/AIDS fields as vital measures for effectively managing PMTCT programmes. The same study indicated the need for adequate numbers of health workers to minimize the ever expanding heavy load in order to strengthen the PMTCT programme.

The study done in South Africa by Sprague, et al (2011) investigated if health system weakness constrained access to PMTCT and maternal HIV services. The study findings showed that there was poor data management in PMTCT programmes. Some participating sites where there was no computer the information was recorded manually, and after comparing the recorded indicators and the actual tallied figures the result reflected only a portion of PMTCT and ART activity, and generally the data collected was of poor quality.

2.4 The Need for further Research

To summarize, studies presented here found that PMTCT programmes face numerous challenges for successful implementation:

- Home delivery was found to be a barrier for PMTCT programmes as mothers and new born babies miss the opportunity to receive medications necessary for prevention of HIV to the new borns.
- Lack of male involvement in the PMTCT programme results in poor support to the pregnant mothers, as well as development of stigma in the family.
- Failure to comply with the given clinic appointment date as well as not taking medications as prescribed by health care workers was found to be another challenge for the programme as pregnant mothers and small children would not be able to adhere to their medications.
- Stigma surrounding HIV/AIDS and stigma associated with formula could lead to mothers not giving formula feed to their babies as they were scared of being branded as HIV positive.
- Other places reported experiencing shortages of ARV's drugs and ended up referring patients to other clinics, health centres or hospitals for medications' refill. Some patients were not able to reach this destination and subsequently returned home without receiving their ARV's medications and hence hindering the PMTCT programme.
- Some health facilities experience problems with the shortage of health care workers as those who are available have been facing numerous challenges such as heavy work load, lack of adequate PMTCT training and re-training, as well as poor handling of PMTCT and antiretroviral medications data.

Based on the evidence presented here, PMTCT programmes, if implemented correctly, are an effective way of reducing vertical HIV transmission. However, the structural and socio-cultural factors identified here could impede successful roll-out of such programmes. As far as could be ascertained, no specific study has been done in Namibia to investigate these factors impairing PMTCT programmes and will therefore be investigated in this study. The structural and socio-cultural factors identified in this literature review served as the source for the interview guide developed for this study.

Chapter 3: RESEARCH METHODOLOGY

3.1 Introduction

Qualitative research methods were used in this study. In-depth face to face interviews were carried out with health care workers including doctors, nurses and community counsellors who have been involved in PMTCT activities at their respective sites. The study interviewed them about their experience and views on how socio-cultural and structural factors influences the PMTCT outcomes at their health facilities and also endeavoured to gain useful insights from study participants (health workers) for possible improvement of PMTCT programs.

3.2 Study area

Rundu district is one of four districts found in the Kavango region – located in the north east of Namibia – and about 700 km from the capital city of Windhoek. Other Kavango region districts include Andara, Nyangana and Nankudu. Rundu is the administrative centre of the Kavango region with an estimated population of about 121120 NID (estimated in 2007) and with an HIV prevalence of 24.5%. According to the Namibian Sentinel Survey (2012) it still stands as one of the districts with high HIV prevalence rates in Namibia.

Rundu district has one intermediate hospital as a referral hospital which serves as such for the entire Kavango region and also the Caprivi region. The Main ART clinic of the district is located within the hospital premises. The main ART clinic monitors HIV/AIDS patients who come to the hospital, also those referred from district health centres who have been consulted as pregnant mothers admitted to maternity wards. The other PMTCT activities for the hospital which include the ANC visits, counselling and testing for pregnant mothers, determining the eligibility for HAART or AZT prophylaxis for infected pregnant mothers, testing (doing DNA/PCR) and administering NVP prophylaxis for new-borns, have been conducted at a nearby clinic which is also within the hospital premises of the Rundu clinic.

Rundu district has three health centres which are Sambyu health centre, about 30km from Rundu town, Mupini health centre which is about 15km from Rundu and Bunya health centre which is about 40km from Rundu town. The ART and PMTCT activities at these centres have been done by nurses and community counsellors of the site, together with a team from Rundu main ART clinic. All these sites have been enrolled for IMAI (Integrated Management for Adult and Adolescent Illnesses) where nurses prescribe medications for ART follow-up. A main ART team, which involves a doctor and ART nurse, visit once per month for ART initiation and also for site supervision.

The district has 26 clinics. The district's main clinics with a high number of patients are Nkarapamwe, Ndama and Sauyemwa. These three main clinics also have enrolled the ART services and are implementing PMTCT activities.

3.3 Target group/population

This study focuses mainly on the health care workers who have been involved in delivering PMTCT and ART services in the Rundu district in Namibia and have been involved in delivering PMTCT and ART services. The participants include doctors, nurses and community counsellors working at the hospital, in three district health centres and in three district main clinics. The inclusion criteria were:

1. Health workers participating /involved in PMTCT activities at seven selected health facilities
2. Worked at the study facility for at least six months
3. Working at the PMTCT clinic at the time of the study
4. Present during day of interview
5. Provided consent to participate in the study

Rundu clinic which is located within the hospital premises was excluded from the study as the clinic and study participants failed to meet the inclusion criteria.

The health workers were obtained from their working places and interviewed for the study at a time convenient to them. Prior arrangements were made before the interview. The total number of health workers for interviewing purposes was 24.

Due to the fact that some of the sites and participants failed to meet the inclusion criteria, the number of study participants was allocated as follows: From Rundu State Hospital the number of health workers who participated in the study was six 6 including one doctor, three nurses and two community counsellors. Bunya Health Centre four – two nurses and two community counsellors, Mupini and Sambyu Health Centres three each – including two nurses and one community counsellor each, Nkarapamwe and Sauyemwa Clinics three each – two nurses and one community counsellor each and Ndama Clinic two participants – all were nurses.

3.4 Sampling method

Study participants were recruited/selected purposively on the basis of the abovementioned inclusion criteria and involved the nurses and community counsellors, except Rundu hospital where the doctors were also available. Where there was more than the estimated number of health workers, the most senior one was preferred for the interview which was conducted in English.

3.5 Data collection

As mentioned, qualitative semi-structured interviews were used as data collection tool in this study. The semi-structured interview guide consisted of structured questions on: The cadre of health worker, e.g. a doctor, nurse and community counsellor; Length of time working at the facility, for how long has he/she been delivering PMTCT services and if she/he attended any training courses on ART and PMTCT. Thereafter the open ended questions were posed on health workers experience and views on: Socio cultural and Structural factors and their influence on PMTCTC outcomes; their experience and views on the problem of home deliveries, the role of male involvement in the PMTCT programme, importance of compliances to taking ARV's medications and attending to the clinic follow-ups, challenges associated with HIV/AIDS stigma, as well as stigma towards bottle feeding. Also health care workers were interviewed about their working environment and how they were handling and monitoring the PMTCT and ART data. In the last part of the interview they were asked to mention the most challenging factors the PMCT programme is facing, as well as their view on how the PMTCT programme could be improved.

All the interviews were conducted in English as all study participants were conversant in English. Guidance of semi structured interviews is from Hudelson (1994).

3.6 Data analysis

Data were analysed and integrated using thematic analysis (Graneheim, 2004).

3.7 Ethical considerations

Ethical approval was obtained from Stellenbosch University's Ethical Committee South Africa; Permission to conduct the study was obtained from the office of the Chief Medical Officer: Kavango region (where Rundu district is located) and from the office of the Principal Medical Officer: Rundu district. The research participants were requested to complete the consent form and no one was discriminated against if she/he opted not to participate.

Data collection was as confidential and anonymous as possible as some of the questions put to the participant sounded sensitive due to the fact that the researcher was trying to obtain their views on various PMTCT issues and on their working environment. No one else of any selected facility knew who else volunteered to take part in the study. The interview was conducted in a convenient, confidential area away from other health care workers during the time of interview.

The study volunteers were not audio or video recorded as many felt uneasy and uncomfortable regarding this procedure.

Chapter 4: RESULTS

4.1 Introduction

Results obtained from the interview with the health care workers at various health facilities are presented in this section. For better illustration of findings, appropriate graphs and tables will be used. The total number of figures in this chapter is nine and the total number of tables is nine.

4.2 Demographic data

Table 1: Number of Participants per health facility

Health facility	Frequency
Rundu State Hospital	6
Sambyu Health Centre	3
Bunya Health Centre	4
Mupini Health Centre	3
Nkarapamwe Clinic	3
Sauyemwa Clinic	3
Ndama Clinic	2

Rundu State Hospital had the most participants, 6 (six) out of 24 thus contributing a quarter of the total number of participants. The next site which provided a high number of study participants was Bunya Health Centre. Ndama Clinic with only 2 (two) participants out of 24 was the site with the minimal number of respondents who participated in the study. The rest of the other (four) health facilities contributed 3 (three) each out of the total number of respondents who participated in the study.

Table 2: Health care worker category

Cadre	Frequency
Medical doctor	1
Registered nurses	12
Enrolled nurses	3
Community counsellors	8

Most of the participants were the Registered nurses, contributing a half of the total number of participants. The next cadre of health care workers with a high number of study participants was the community counsellors, while only one medical doctor was available for the study.

Table 3: Distributions of study participants according to sex

Sex	Frequency
Female	16
Male	8

The majority of participants were females who comprised two thirds of the total number of participants – males thus comprised only one third of the total number of study participants.

Table 4: Length of involvement in PMTCT

Duration	Frequency
Less than 2 years	2
2-5 years	8
More than 5 years	14

More than a half of study participants, 14 out of 24, were highly experienced in dealing with and providing PMTCT services with working duration of more than five years. One third of participants had been involved with PMTCT for the past two to five years. Only 2 (two) of the 24 participants had less than two years experience.

Table 5: Ever attended training in PMTCT

PMTCT Training	Frequency
Yes	16
No	8

The majority of participants, two thirds of the total 24 participants, had attended the PMTCT training. One third of the total number of participants had never attended any formal PMTCT training.

Table 6: Need for more training regarding PMTCT

More training re PMTCT	Frequency
Yes	24
No	0

All participants explained their need for more training regarding PMTCT.

Table 7: Number of Health Care Workers available to attend to patients on a particular day at the Health facility

Number of Health Care Workers	Frequency
Less than 4	0
4-6	2
7-8	2
9-10	2
Above 10	1

Most of the clinics and health centres (four out of seven) have between 7-10 health care workers for providing daily clinics and health centre activities. Two out of seven Health facilities have between 4 and 6 health workers present on a particular day to attend to patients. Only one facility has more than 10 health care workers to attend to patients during a particular clinic day.

Table 8: Number of patients attending a clinic during a busy day

Number of patients	Frequency
150-200	2
201-250	4
251-300	1

The majority of sites – 4 out of 7 – attend to between 200 and 250 patients during a busy day. One site receives nearly 300 patients during an extremely busy day. Two other sites receive between 150 and 200 patients on a busy day.

Table 9: Number of patients attending a clinic during a less busy day

Number of patients	Frequency
50 or less	1
51-100	3
101-150	3
More than 150	0

Most of the sites – 6 out of 7 – receive between 50 and 150 patients during a less busy clinic visit day. Only one site attends to less than 50 patients when the clinic is not very busy.

N.B. – For figure 8 and 9 it doesn't mean that all stated numbers of patients who attend the clinics and health centres are for PMTCT and HIV related services. The number of patients counted involved the total number of all patients who have to be attended to for various reasons such as family planning, immunizations, ANC, PMTCT, wound dressing and other medical conditions. Only the Rundu ART Clinic at the State Hospital attends exclusively to ART and PMTCT clients.

4.3 Socio-cultural factors and PMTCT outcomes

4.3.1 Home delivery

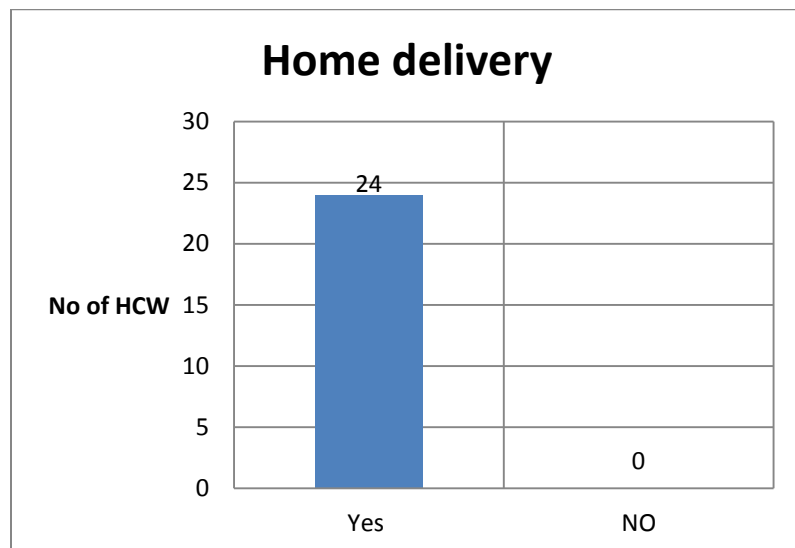


Figure 1: Home delivery. A figure showing the response of participants when they were asked if they normally received babies who were born at home

All participants and participating sites agreed that at their health facilities they normally received babies who are born at home.

Based on the responses from participants on why they think some of their clients deliver at home as opposed to the clinic/hospital, the following issues were identified:

Distance from the health facility:

Some pregnant mothers live far from the hospital or clinic and by the time labour starts it's difficult for them to reach the health facility on time (Participant 3, Rundu State Hospital).

Lack of transport:

For people who live deep in the bushes it's difficult to obtain transport especially during the night when there is no any means of transport available and as a result one sees many home deliveries (Participant 1, Sambyu Health Centre).

Financial difficulties:

Other pregnant mothers, especially those who live far from the health facility and who lack family and partner support, often don't have money to pay for transport and end up delivering at home (Participant 3, Sambyu Health Centre).

Culture and beliefs:

Our community is already very well acquainted with home deliveries... since long ago the grannies and the mothers have been attended to by very old women in the various villages, they use traditional medications at home and many firmly believe that if you go to the health facility and mix with hospital medications, something bad may happen either to the mother, a newborn or both (Participant 2, Rundu State Hospital).

Ignorance:

It is common practice to some of the families and communities to opt for home deliveries, despite their accessibility and affordability to be able to go to a health centre or hospital... they just can't comprehend whether there is an added advantage to go to the hospital for the delivery (Participant 1, Sauyemwa Clinic).

Unaware of their Expected Date of Delivery (EDD):

Other pregnant mothers don't know their EDD and as a result they can't prepare themselves appropriately and make the necessary arrangements for delivery such as staying nearby to the health facility and also keeping enough money ready especially for transportation costs (Participant 1, Rundu State Hospital).

Failure to attend Antenatal Care services (ANC) during pregnancy:

Some mothers who never attended any visits to the clinic or hospital during their pregnancy period are scared to go to the hospital when labour starts... they are just scared to be asked by the nurses and other care givers "why you didn't come to attend ANC services during your pregnancy" (Participant 6, Rundu State Hospital).

Fast progression of labour:

Precipitated labour makes that these mothers do not go to the Health Centre on time as the labour progresses very fast...labour starts then the baby is already out (Participant 1, Mupini Health Centre).

4.3.2 Male involvement

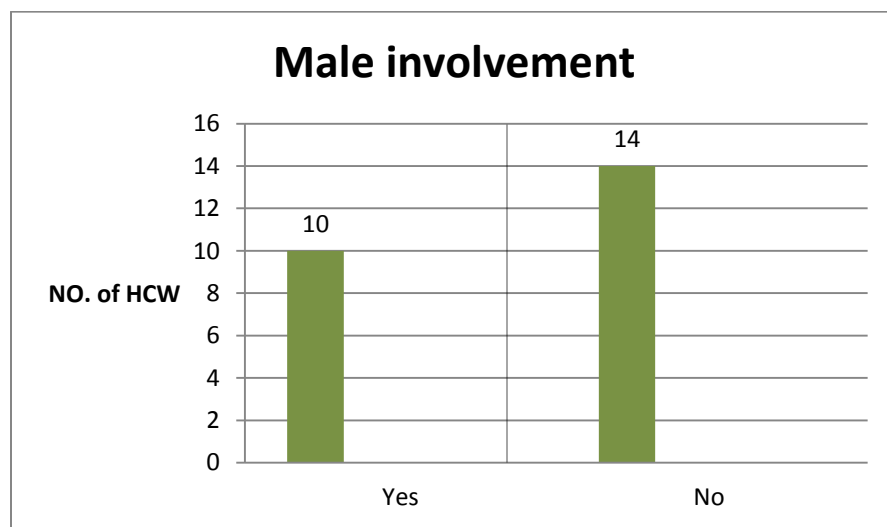


Figure 2: Male involvement in the PMTCT programme. A figure showing participants' responses to a question whether men escort their pregnant female partners when they go for the ANC services, especially during HIV counselling and testing

The majority of participants – 14 out of 24 – stated that there is no male involvement in the PMTCT programme and this represents one of the major obstacles/barriers to the programme; only 10 of the total number of participants said there are were only a minimal number of men who escort their partners to ANC.

Based on the responses by participants on why they think men do not escort their pregnant female partners to go for ANC services, especially during HIV counselling and testing, the following issues were identified:

Lack of knowledge/illiteracy:

Men don't escort their partner because most of them lack information. They don't know the importance of escorting their pregnant partner to the hospital; they think that ANC services are only for pregnant mothers and they don't want to be associated with it. Some just don't want to change, they won't come even if you ask them to come. Other men are just stubborn and too proud; they think that being seen at the ANC escorting their partner is a sign of weakness... that people will say he has been controlled by a woman (Participant 2, Ndama Clinic).

Stigma:

Men don't go to ANC with their partner because of stigma, they think if my partner will be HIV positive what am I going to do, or if I meet people at the clinic who know me they will think that I'm also HIV positive (Participant 1, Sambyu).

Denial:

Some men don't escort their partner to ANC services and for HIV counselling and testing because are in denial; they say "Me.... I'm not HIV positive, if I'm positive I won't start treatment, so there is no need for me to go there (Participant 5, Rundu State Hospital).

Partners of pregnant women already married to someone else:

This is a huge challenge many women are facing. The person who impregnated a girl or a woman sometimes is married or lives with another woman. It is just not possible for him to leave his wife and family behind and escort another pregnant woman to go for ANC (Participant 4, Rundu State Hospital).

Lack of responsibilities:

Traditionally in our area marriage does not exist, some men are irresponsible; most girls raise their children as single mothers (Participant 4, Rundu State Hospital).

Fear for HIV disclosure:

Men do not escort their pregnant partners because they don't want their HIV status to be disclosed. Other men already know that they are HIV positive and others are even on ARV's medication without the knowledge of their partners. They think going to the clinic or hospital together with their partner for HIV testing, which will be required at ANC, is like disclosing their status (Participant 4, Rundu State Hospital).

Multiple sexual partners:

Some women and girls tend to have more than one sexual partner. When they fall pregnant they can't tell who is really responsible for the pregnancy... others meet at drinking places and shebeens. They have sex while they are very drunk... as a consequence when they conceive, it is extremely difficult for them to recall the responsible man, and as a result they go to ANC alone ... the father of the child remains unknown (Participant 2, Rundu State Hospital).

Older partners:

Some male partners are many years older than their young girls who sometimes are under age. Men feel so ashamed escorting these young girls to ANC as a couple and also fear the law as it will appear as if they have committed rape ... escorting them to

hospital is like reporting yourself indirectly to the police (Participant 1, Rundu State Hospital).

Working far away or outside town:

Male partners work far from where their girlfriends and wives live, so it is difficult for them to go together for ANC services (Participant 1, Rundu State Hospital). Others are on a migrant work/labour scheme and only come to see their family when they are granted leave (participant 1, Nkarapamwe Clinic).

Long waiting hours at the clinic:

Some men complain that clinic visits take up a lot of their time... and this is true especially during the first time visit when a client can spend more than six hours at the clinic. As a result many men, because of their busy schedule, can't manage to come to the clinic with their partners... men are not patient enough (participant 3, Nkarapamwe Clinic).

4.3.3 Compliances and follow-up

4.3.3 (A) Compliances to follow-up

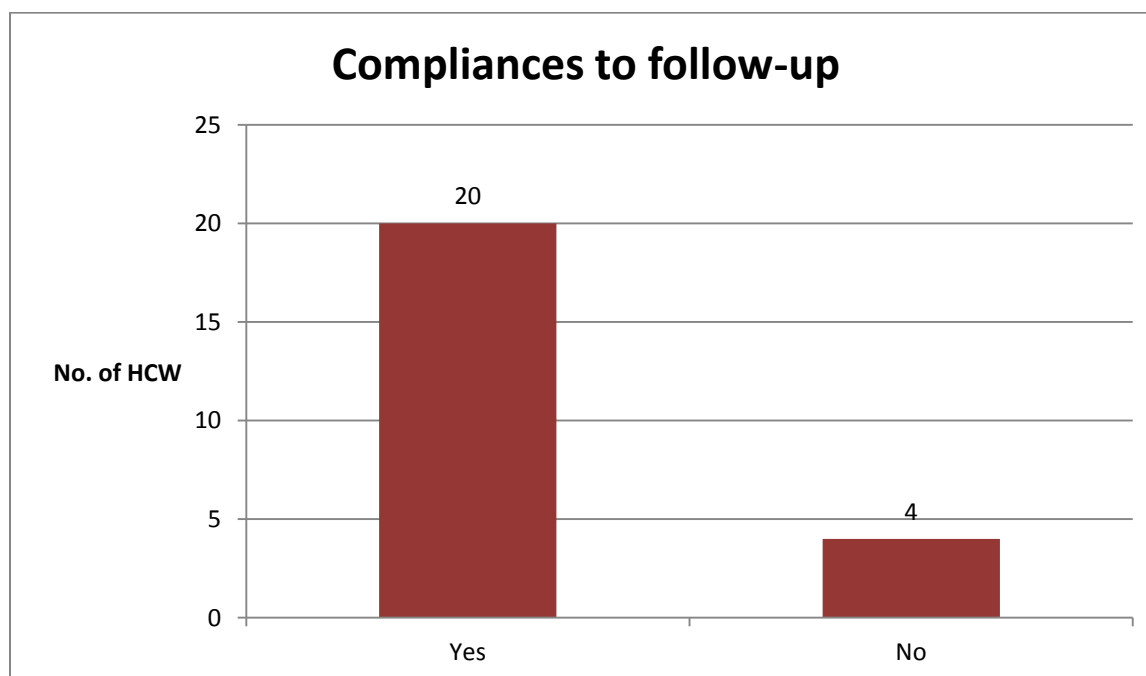


Figure 3: Compliances to follow-up. A figure showing responses of participants when asked if pregnant mothers who are receiving antiretroviral (ARV) prophylaxis or highly active antiretroviral therapy (HAART) for PMTCT, are coming for their appointments.

From Figure 3 it can be seen that 20 out of 24 participants reported that their clients have been coming regularly to the health facility and thus not missing their follow-up. In total, 4 (four) out of 24 participants had this problem with their patients and complained that they were not coming regularly to the health facility for their scheduled appointments.

4.3.3 (B) Compliances on taking medications

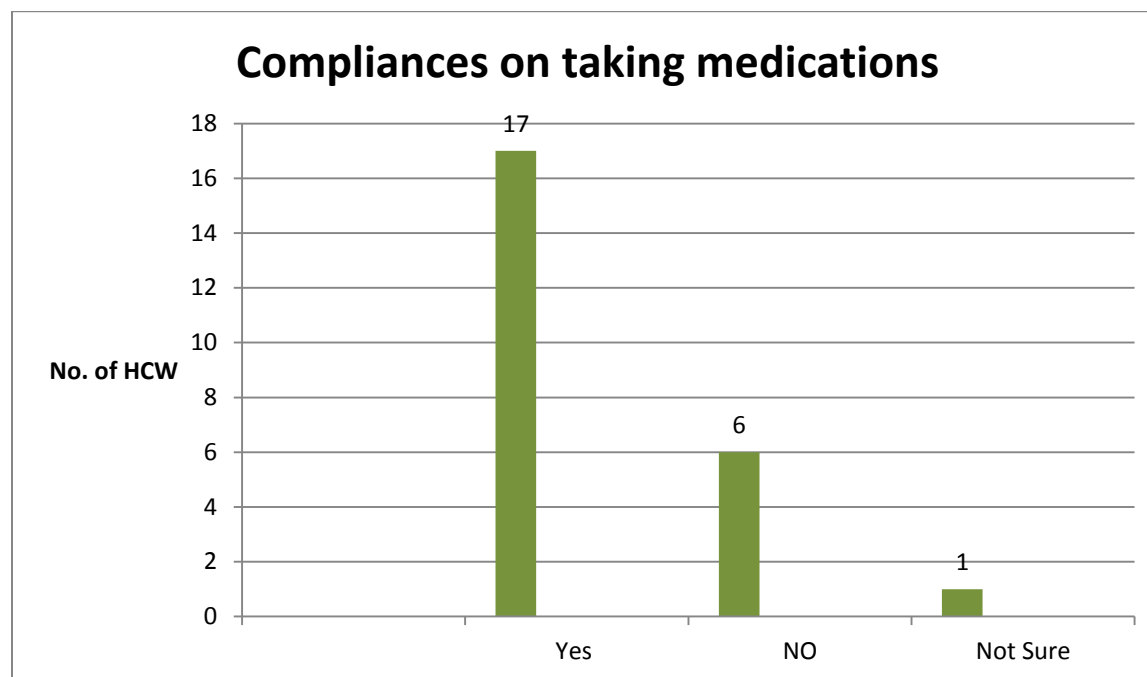


Figure 4: Compliance to medications. A figure showing the response of study participants when asked whether pregnant mothers, who are HIV positive, are regularly taking their ARV's prophylaxis and HAART medications

Figure 4 shows that the majority of participants – 17 out of 24 – believed that their clients comply by taking their medications as prescribed. In total, 6 (six) out of 24 of the health care workers reported that their clients do not take their medication as prescribed by a doctor or a nurse. Only one health care worker was not sure if the client took medications as prescribed stating that *"you can never tell if someone is taking medications at home or not"*.

Based on the responses from participants on why they think some pregnant mothers, who are HIV positive, are not coming to the clinic for their appointments and are not regularly taking their ARV's prophylaxis and HAART medications, the following issues were identified:

Lack of knowledge:

They don't understand that the medications they are taking are not only for themselves but also for the benefit of their children (Participant 4, Rundu State Hospital).

Lives far from the clinic or hospital:

Some clients live long distances away from the health facility so it is difficult for them to adhere to coming regularly for follow-up and taking medications as prescribed (Participant 2, Ndama Clinic).

Poverty:

Some clients are poor and can't afford to pay for transport. As a result they miss their follow-ups; they come late to the hospital and also don't take medications as prescribed (Participant 1, Ndama Clinic).

Illiteracy:

There is a lot of illiteracy here... some clients can't grasp what you are trying to tell them... they don't know whether the medication they are receiving is very important to them and their children... despite all benefits they still miss some doses (Participant 2, Rundu State Hospital).

Stigma:

I remember one client told me that "at the place where I'm staying my colleagues teased me why I'm always going to the hospital... maybe I have the HIV virus, they say.... So I stopped going to the hospital" (Participant 5, Rundu State Hospital).

Full HAART vs AZT Prophylaxis:

Pregnant mothers who are on full HAART come to take their medications regularly, those who are on AZT prophylaxis are a problem; they don't come to collect their medicines when it is finished... they merely wait for the next ANC follow-up. Others who are on AZT prophylaxis, miss their follow-up, and even if you try to trace them you won't find them (Participant 1, Sambyu Health Centre).

4. 3. 4 Stigma and feeding choices

4.3.4 (A) Stigma regarding HIV counselling and testing

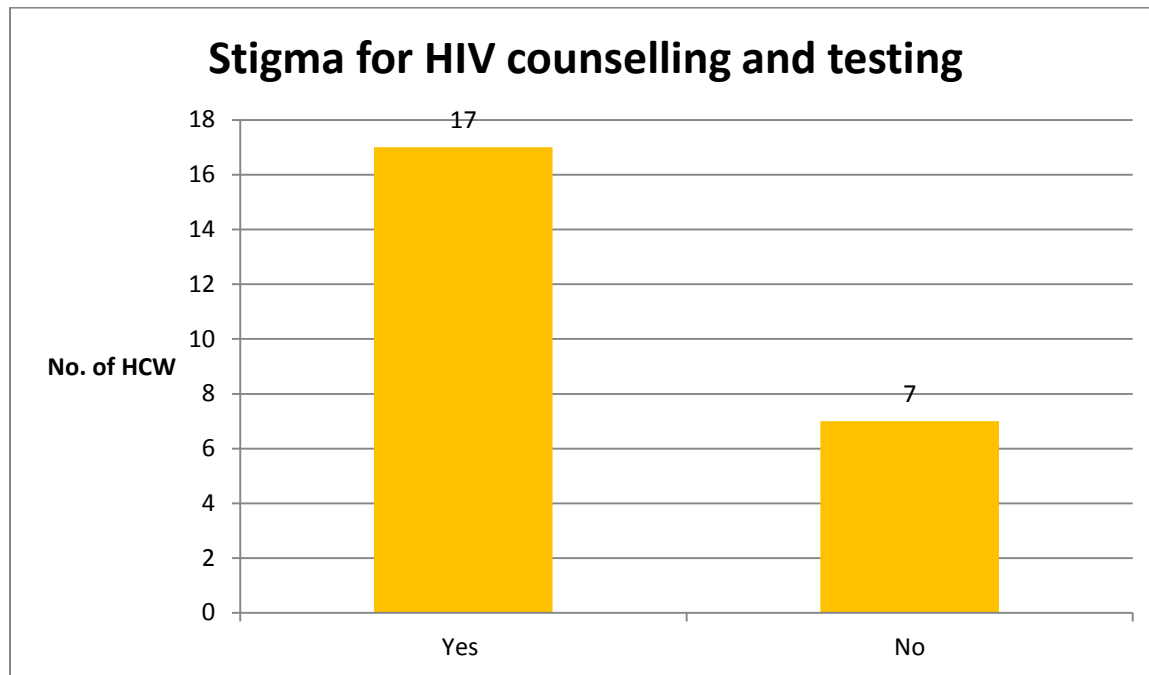


Figure 5: Stigma regarding HIV counselling and testing. A figure showing responses of the study participants when asked if they think stigma in the community could be the cause for some pregnant mothers not to come for HIV counselling and testing, as well as making regular clinic visits.

The above figure shows that 7(seven) out of 24 participants explained that stigma is disappearing nowadays and pregnant mothers are not discriminated against when they go to the hospital or clinic for HIV counselling and testing. However, the majority of health care workers – 17 out of 24 – thought that stigma is still a big challenge to the community and impairs people from going to a health facility for HIV counselling and testing.

4.3.4 (B) Stigma towards formula feeding

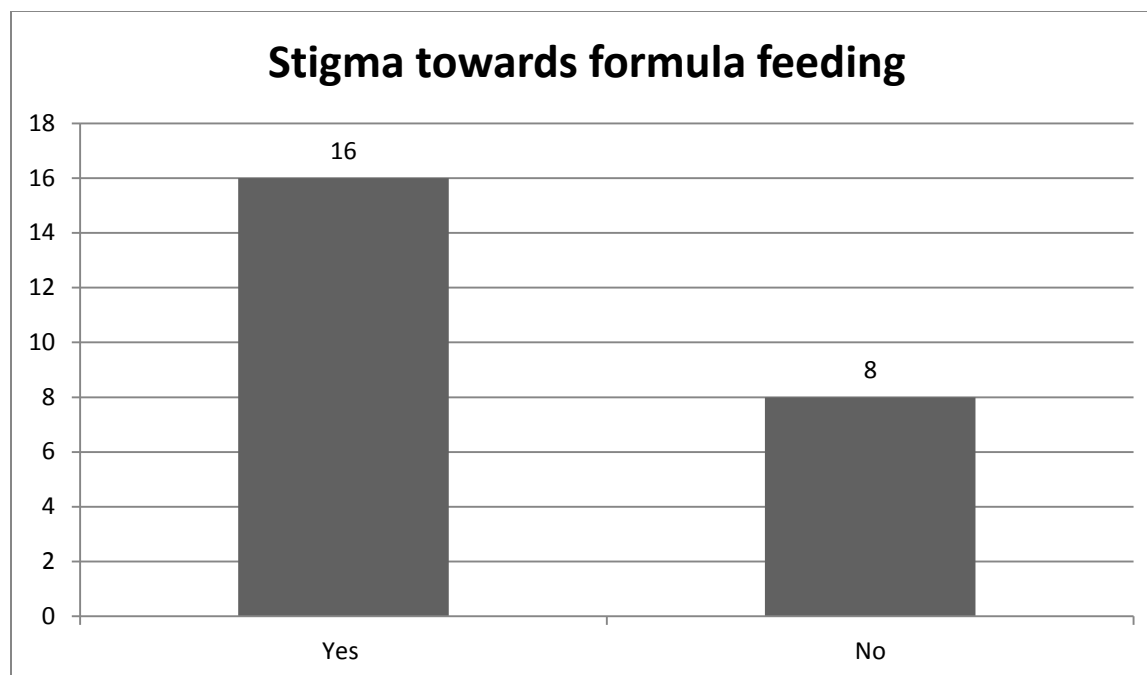


Figure 6: Stigma towards formula feeding. A figure showing responses of the participants when answering the question whether HIV positive mothers are not stigmatized and discriminated against from their close family and friends when they are using bottle milk for feeding their babies.

This figure shows that one third of participants acknowledged that stigma for using bottle feeding are nowadays disappearing. However, the majority of health care workers – two thirds of them – feel that there still is a lot of stigma in the community which leads to some mothers not giving formula feeding to their babies.

Based on the responses by participants of how they think some pregnant mothers who are HIV positive are overcoming stigma associated with formula feeding, it was learnt that such mothers decide to hide their HIV status by creating some other reasons for their use of bottle feeding:

Cannot produce enough breast milk

"I don't have enough milk that's why I'm using formula feeding" (Participant 1, Rundu State Hospital, quoting a client).

Busy at work

"I am working, I can't breast feed while I'm at work, that's why I am formula feeding" (Participant 1- Rundu State Hospital, quoting a client).

Due to the doctor's advice

"I was told by my doctor that my milk is not okay, that's why I am using formula milk" (Participant 1, Rundu State Hospital, quoting a client).

Do not want to breastfeed

"This is the way I like, I just don't want to breastfeed" (Participant 2, Rundu State Hospital, quoting his client).

4.4 Structural factors and PMTCT outcomes

4.4.1 Drug availability

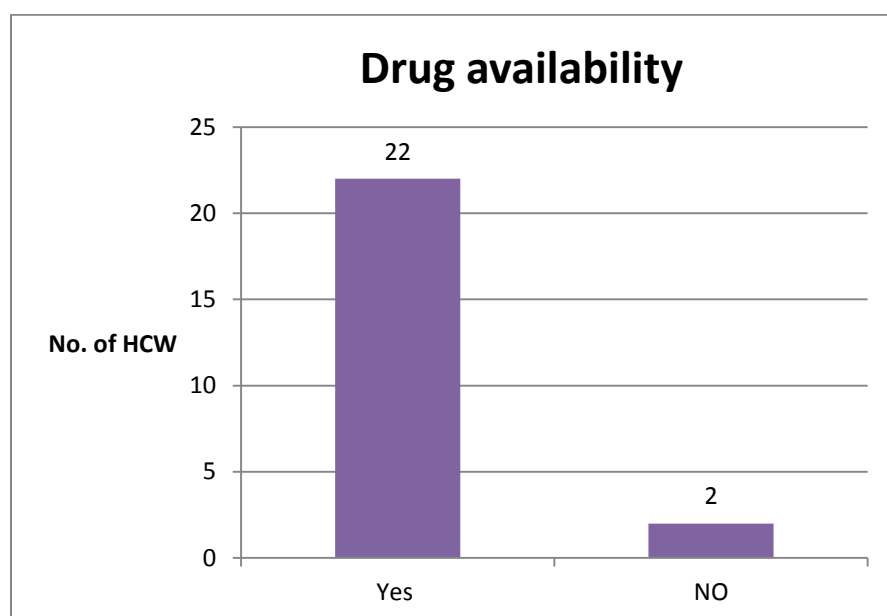


Figure 7: Drug availability. A figure showing availability of HAART and ARV's prophylaxis to health facilities

From the figure it can be seen that the HAART and ARV's prophylaxis medications are readily available to participating health facilities – as pointed out by 22 out of 24 participants – due to work well done by the pharmacy which checks the pharmacy stock and makes sure that medications are always available. Also proper and thorough management make availability of drugs at the health facility possible.

However, 2 (two) out of 24 participants stated that some of the drugs are not always readily available.

Based on the responses by some participants on why they think certain ARV's medications are not readily available to health facilities, the following issues were identified:

Medications – running out of stock:

Sometimes medications run out, especially nevirapine syrup, and we end up referring patients to other facilities, but some patients are not able to reach these clinics and subsequently go back home. The facility is trying to order sufficient medications (Participant 1, Nkarapamwe Clinic).

Improper ordering of medications:

At the start we had some problems; medications were running out because we were learning, but now we know how to handle and how to do proper ordering (Participant 2, Nkarapamwe Clinic).

4.4.2 Human resources

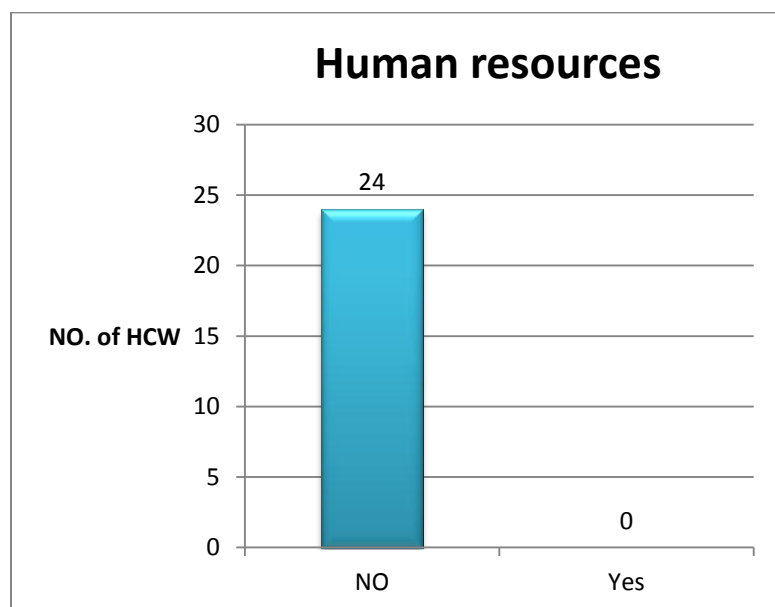


Figure 8: Human resources: A figure showing responses of study participants when asked if number of staff is correlating to the patient load.

From the above figure it shows that all participants expressed their feeling that a shortage of staff was impairing their service delivery as the number of patients is too large compared to the present number of health care workers.

Based on the responses from participants on how they ensure that there is always enough staff to run PMTCT services at the clinics, the following approaches were described:

Delegate a special staff (PMTCT/ART nurse):

Usually we delegate a nurse who is specialized in providing PMTCT and ART services, or the one who has been delegated by the clinic to provide ANC services... to also attend to pregnant mothers who are on the PMTCT programme – so together with the community counsellors they conduct HIV counselling and testing as well as providing ARV's prophylaxis and medications to eligible clients (Participant 1, Mupini Health Centre).

Involve every nurse in running the PMTCT services:

We used to conduct in service training for our staff at our facility. Any staff member who attended any training has to give a brief presentation and update others about the new guidelines or knowledge when he/she returns. In doing so everyone at our facility is competent and capable of delivering PMTCT services (Participant 1, Ndama Clinic).

Special day for pregnant mothers:

At our facility we usually receive many clients. The high patient load has brought certain inconveniences for pregnant mothers as they have to spend many hours waiting for services. Our facility decided to choose Friday as a special day on which we only attend to pregnant mothers and children. (Participant 4, Rundu State Hospital).

4.4.3 Data management

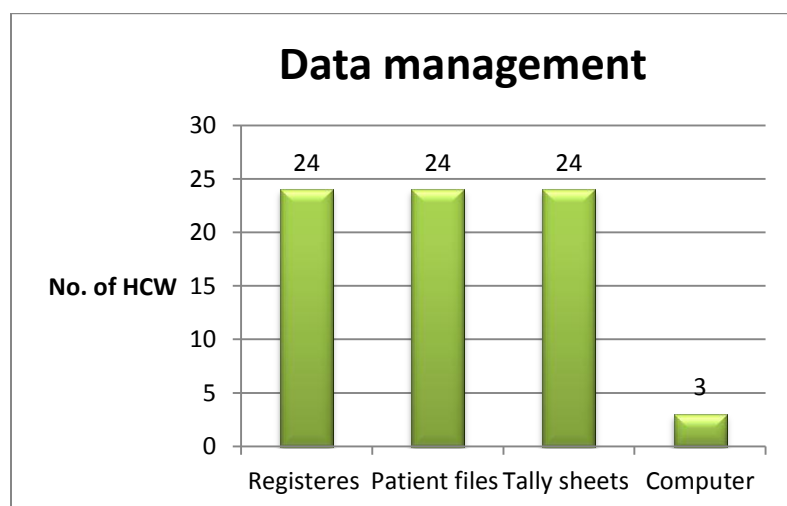


Figure 9: Data management. Responses from the participants when were asked if they have a health information management system (HIMS) for providing PMTCT/ART services.

The figure shows that all sites are using the manual form of data entry and management. Only one site which was presented by its three health care workers, is, in addition, also using a computer (electronic form) for entering and managing their data.

4.4.4. Available Support Structures from the Clinics and Health Facilities

A number of support structures were mentioned by respondents which they felt help patients to overcome some of the PMTCT barriers:

Health Education:

We are offering health education during all clinic visits; we talk about the importance of accompanying their partners, the benefits of staying near to the health facility when they are about to deliver, also we give them information why they have to deliver at the hospital and also importance of taking their ARV's medications (Participant 1, Sauyemwa).

Linkages with support groups:

Pregnant mothers who are tested HIV positive are linked to support groups, we have Catholic AIDS support groups, expert patients and a support line... all are doing a great job and enable people to cope with the situation (Participant 1, Sambyu).

Promote couple counselling and follow-up:

We are trying our best to promote couple counselling and testing as well as HIV disclosure for our clients. If couples come together to the clinic we will award them by seeing them first; this will act as an incentive to them and it will also motivate other couples to come together to the clinic... as a result it will increase male involvement in the PMTCT services (Participant 3, Nkarapamwe clinic).

Conducting outreach services:

For those who live far from the Health facility we conduct outreach services. We go with a community counsellor and a nurse; we do HIV counselling and testing, provide health education and also we trace other PMTCT mothers who didn't come for follow-up within our catchment area (Participant 3, Sambyu Health Centre).

Defaulter tracing:

We are utilizing TCE (Total Control of Epidemic) officers and maternal volunteers to trace pregnant mothers who missed their clinic appointments and also mothers who gave birth at home to make sure that they come for a refill of medications for themselves and for their babies... we are doing this so as to make sure none of our clients miss her medication doses (Participant 3, Nkarapamwe Clinic).

Providing them with shelter in the hospital/clinic compound:

We have problems with home deliveries as our clients live far from the health facility. Thus for those who are about to deliver and who live far from our Centre we provide shelter in our compound so that when labour starts it is easier for them to come straight to the facility (Participant 2, Bunya Health Centre).

4.5 Most challenging factors in the PMTCT programme

Below are the responses from participants to what they perceive to be the most challenging factors in rolling out a PMTCT program:

Ignorant mothers:

As a rule we at the clinic provide a comprehensive health education to the mothers. But when they go back to the community what they do in practise is different... You tell them to breastfeed exclusively for six months but when they return home they are advised to practice mixed feeding and they agree. I think more health education and knowledge dissemination needs to be taught in order to improve the PMTCT outcomes (Participant 2, Ndama Clinic).

Transport problems:

For patients who live far from the health facility transportation remains a problem and as a result they miss some medication doses and also they deliver at home. As part of the solution the outreach team must help them by providing counselling, replenish their medications and remind them about compliance to their clinic appointment and taking of medications (Participant 2, Ndama Clinic).

Follow-up of the mothers after delivery:

We are facing a big challenge with regard to post- partum follow-up. HIV negative mothers are not being followed up after delivery and as a result they may end up transmitting HIV infections to their new borns if they acquire infections during late pregnancy. Babies may suffer from HIV infections without being diagnosed. For HIV positive mothers some omit to return their babies for testing and for NVP prophylaxis and as a result this may lead to a late diagnosis of HIV infection or babies won't receive the required interventions to prevent the HIV infections. To overcome this challenge health education has to be emphasized: adherence to NVP to exposed babies as well as testing and retesting of the babies at 6 weeks and when they are 9 months. Also, in order to test for late pregnancy HIV infections, every pregnant woman has to be retested at 36 weeks of pregnancy. (Participant 1, Ndama Clinic)

Lack of adequate knowledge and skills in some health care workers:

Some of the health care workers lack adequate knowledge and skills regarding PMTCT services. They don't know when to test the mother or the child, they don't know when and what type of ARV's prophylaxis to give. It is difficult for them to monitor medications' side effects, and they don't know how to do a DBS (dry blood spot) which can diagnose an HIV infection to small children from 6 weeks. The possible solution – in order to improve the programme – is a need for health care workers to be sent for training and retraining regarding delivering PMTCT services. In-service training has to be organized whereby staff at a particular facility will be trained by another facility staff who is well knowledgeable and able to deliver PMTCT training to his/her colleagues (Participant 6, Rundu hospital).

4.6 Suggested changes so as to improve PMTCT programmes

Below are the responses from participants to what they perceived to be some recommendations and necessary changes in rolling out a PMTCT program:

Bottle milk to be supplied for free:

Formula milk has to be supplied to each HIV positive mother and breastfeeding has to be avoided. In doing so the nation can further reduce HIV transmission from mothers to their new borns (Participant 2, Sauyemwa Clinic).

More ambulances needed:

If the government could provide sufficient ambulances to the peripheral clinics it will have a positive effect on the PMTCT programmes. Ambulances would greatly relieve the transport problems as they could speedily pick up pregnant mothers from their homes for transport to the health facilities when they go into labour (Participant 2, Sauyemwa Clinic).

Full HAART for all:

It is important that all HIV positive mothers are placed on full HAART medication. Full HAART can efficiently reduce HIV transmissions to the new borns and is also associated with very good adherence to taking of medications compared to AZT prophylaxis (Participant 1, Sauyemwa Clinic)

Initiate campaign to involve males:

Special campaigns should be initiated to bring men on board. It should be a rule that every pregnant woman who comes to the clinic has to be accompanied by her partner for couple counselling and testing and health education. For the programme to be successful men have to be involved and clinics have to be men friendly, e.g. avoiding long waiting hours and also attempting to make them feel they are also part of the programme. Sometimes men come to the clinic but they remain outside and no one calls them inside. Also clinics have to emphasize HIV disclosure among the couples, to nearby family members and to close friends. This could also help to minimize stigma and stigma associated with formula feeding (Participant 1, Nkarapamwe)

Training of traditional birth attendants:

Since there are many home deliveries in the communities, it is necessary that at least babies be delivered in a safer manner and to achieve this the traditional birth attendants have to be trained how to conduct safe deliveries. They must be provided with delivery kits and protective gloves (Participant 1, Nkarapamwe).

Dissemination of information and health education:

Health education on HIV/AIDS and also on PMTCT should be given not only at the hospitals but also at all gatherings, e.g. at schools, churches and during traditional

leaders' meetings; also information has to be disseminated using TV, radio, newspapers, fliers, posters etc. (Participant 4, Rundu State Hospital).

Multisectoral approach:

The problem of HIV/AIDS is much larger than what meets the eye... everyone has to be involved to make a programme successful. Not only staff from the hospitals and clinics but also people from all the ministries, community leaders, politicians, teachers, headmen and headwomen. They have to talk about HIV/AIDS and PMTCT in their meetings. Also traditional healers and herbalists (we are encountering many problems from them as others claim to be able to treat HIV/AIDS) have to be involved and discuss what they can and what they can't do in treating different health conditions (Participant 3, Sambyu Health Centre).

Conducting outreaches and helping mothers who live far from the health facility:

Ministry of health and health facilities have to find ways of helping mothers who live long distances from the clinics/hospitals. They must get people who conduct visits to their homes to help them. Also a team from the hospital has to monitor peripheral clinics to ensure that things are going well there in terms of obtaining the proper care and correct medications (Participant 1, Rundu State Hospital). The clinics have to make use of TCE officers to identify people who do not pitch for their follow-up and if possible, they have to be traced at their homes (Participant1, Sauyemwa Clinic).

Training all nurses for PMTCT:

All nurses at a specific facility have to be trained for PMTCT. This is important because if there is only one trained nurse at the facility she will be overwhelmed by the workload, and when she is not present, patients will be turned back as there would then be no one competent enough to continue PMTCT activities (Participant 4, Bunya Health Centre).

Recruitment of new staff:

The workloads at health facilities are far too large. New and extra staff members have to be recruited and facility staff establishments have to be reviewed. In our clinic staff establishment for example, all posts are already filled but still the workload is too much. Population growth is increasing so there is a need for review of our staff establishment (Participant1, Ndama Clinic).

Chapter 5: DISCUSSIONS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

In this chapter – the last one of this research article – study results are discussed and it ends with the recommendations and conclusion.

5.2 Home deliveries

The study shows that home deliveries still remain one of the major challenges facing the successful implementation of PMTCT programmes. All study sites and all participants acknowledged that they still receive babies who are born at home. Despite sufficient availability of hospitals and clinics a number of children are still not delivered at the health facilities.

Findings from this study about home deliveries correlates with the findings from Uganda documented by Irin (2008). The latter study showed that home delivery was a huge challenge to PMTCT programmes. Despite the majority of HIV positive pregnant women having access to available PMTCT services, still about 60% to 70 % of pregnant mothers gave birth at their homes hence making implementation of PMTCT programmes impossible as ARV'S prophylaxis medications can't be administered to prevent vertical transmission of HIV from mothers to their new-born.

Also findings from this study which shows how home deliveries can impair the PMTCT programme correlates with another study done in Ethiopia by Koye (2013). The latter study showed that home deliveries are one of the predictors for mother to child transmission of HIV. Other factors which were mentioned by Koye as predictors for mother to child transmission of HIV but are not amongst the findings of this study, are village/rural residence, absence of PMTCT intervention regarding the mother, and infant mixed feeding.

This study found that one of the main reasons for home deliveries is a lack of financial resources to visit health facilities. People who live far from the health facilities can't afford the transport fees to take them to nearby health centres for deliveries. Participants indicated a need for the PMTCT services to be extended to where people are residing, otherwise only the urban people and those who live close by the health facility would receive these services. Although respondents were of the opinion that people wish to be closer to health facilities, they also felt that cultural norms and beliefs are preventing them from visiting these facilities. Respondents stated that communities are already well accustomed to the traditional way of living and for many, many years traditional midwives have been conducting deliveries and people have been seeing mothers and children surviving in a similar to those in the hospitals and clinics. This

poses a challenge in convincing them that there are advantages and safety in hospital delivery and that communities should avoid home deliveries.

Other reasons mentioned for home deliveries are ignorance, being unaware of the expected date of delivery (EDD), failure to attend antenatal care services (ANC) during pregnancy and fast progression of labour.

Findings from this study about reasons for home deliveries correlate with other studies done in Pakistan by Shah, et al (2007). Results of the Pakistan study showed that the main reasons for home deliveries were family tradition, lack of affordability to enter hospital, insufficient time in which to reach a hospital and inaccessibility to maternity/hospital services.

Kasenga (2007) from his study in Malawi (discussed earlier) found that a lack of money, distance to the health facility and being ill, constituted the major reasons for home deliveries. Lack of money and distance to the health facility also correlates with findings of this study.

5.3 Involvement of men

Study findings showed that there was no – or minimal – male involvement in the PMTCT programme. The majority of the study participants – 14 out of 24 – explained that the PMTCT programmes lacked involvement of males and as a result impaired its implementation. Study participants further explained that when men are involved in the PMTCT services it results in better outcomes of such programmes.

Reasons given by the participants for the lack of involvement by males were mainly lack of knowledge and men being illiterate: men don't realise the importance of escorting their partners to the clinic and they don't consider that this could be beneficial to them. Other reasons mentioned for lack of involvement by men includes stigma; clinics/hospitals not being friendly to them during ANC visits, especially the first one; someone could be obliged to spend more than six hours just waiting for services to be rendered. Other reasons given for lack of male involvement include the much older partner of a pregnant, much younger woman feeling ashamed to escort the younger partner to a clinic or hospital, working long distances from home and being extremely busy at work.

Findings of this study correlates with the UNAIDS (2012) report which showed that when men are involved in the PMTCT programme the outcomes of such a programme proves to be more favourable. The health care workers can counsel, test and talk to the couples together, and they can subsequently then abide by different ways of protecting their new born from becoming HIV infected.

The findings of this study on the importance of male involvement in the PMTCT programme correlates with the findings of a study done by Aluisio, et al (2011) which showed that infant mortality was reduced by more than 40% compared to when there had been no involvement by males.

Findings of this study that males do not escort their pregnant partners due to a large age difference were similar to a study done in Gambia by Secka (2010) which showed that a big age difference in a couple between an old man and a young woman restricts men from escorting their partners to a clinic as the men feel ashamed. Other reasons given for lack of involvement by men was their limited time availability for attending the clinic and this was further exacerbated by long waiting hours for clinic services and laboratory procedures. These findings are also similar to those reasons identified by Secka (2010) regarding the lack of male involvement in PMTCT programmes.

5.4 Compliance and follow-up

Compliance in taking HAART or ARV's prophylaxis and also regularly keeping appointments are also one of the key measures for prevention of maternal transmission of HIV infection, as well as an effective PMTCT programme. Not all pregnant mothers regularly keep their clinic appointments and not all take their medications as prescribed by health care workers, especially those who are not in full HAART and receiving ARV's prophylaxis. Main reasons mentioned for poor compliance to follow-up procedures and taking of medication are that patients do not realise the importance of taking medications regularly; another reason stated was distance from the health facility which is also associated with poverty as some are unable to pay for transportation.

Findings of this study on the compliance of ARV's medications and follow-up corresponds with a study done in South Africa by Miller (2010) which investigated the reasons why some patients on ARV's are lost regarding follow-up. Respondents mentioned serious barriers preventing treatment as being transport costs and time needed for treatment.

5.5 Stigma and feeding choices

Respondents felt that there was much stigma surrounding HIV/AIDS and bottle feeding in the community. Usually the community had marked mothers who were feeding their babies with bottle milk stating that they were HIV – this fact would then prompt most mothers not to give a formula feeding and sometimes even decide to practice mixed feeding. Those who are able to continue formula feeding always try to concoct other reasons for this practice in order for them to hide their HIV status, e.g. *"I am bottle feeding due to a doctor's advice"*; or *"Because I am suffering from breast and milk problems,"* etc. The majority of health care workers explained that stigma in the community provided a serious hindrance to HIV counselling and testing.

The findings of this study concerning stigma associated with bottle feeding correlates with a study done by Doherty et al (2006). Findings of this study showed that as a way of preventing stigma associated with bottle feeding, some mothers decided to move the formula milk and place it in other containers which were not of its origin.

5.6 Drug availability

This study showed that almost all sites were well equipped with medications ensuring that medicines were available at all times – this was due to staff commitment to regular checking of necessary medications, as well as proper ordering. The study found that at a site where at times medications were running low the health workers would usually then refer patients needing replenishment of medications to other sites. It was noted that the main reason mentioned by the participants to the facility where sometimes medications were missing – especially Nevirapine syrup – was that the majority of health care workers were still learning how to run the programme. The ART programme and some of PMTCT components were initially entirely in the hands of Rundu State Hospital but due to the need of decentralizing services, other peripheral clinics were then also involved. The site where at times Nevirapine was running low – apart from being one of the new sites which had started to implement ART and PMTCT programmes – was also a site where there was a high patient load.

Lack of medications at certain sites had the same consequences as the study conducted by Rujumba et al (2012) ascertained. They documented that some of the clinics and health centres at times lacked Nevirapine for the mothers and their babies, and as a result they referred clients for resupply of medications. This brought some inconvenience to patients as most of them did not have transport money to get them to the other site and thus they could have ended up not getting there – and hence not being able to receive the vital medications which are needed to prevent infection transfer to the unborn or new born child.

5.7 Human Resources

All sites have shown that there is disproportional relationship between the number of health care workers and the number of patients who come to seek care at the health facility. The health care workers have been facing heavy workloads due to a high patient load and also because they are obliged to implement a multiple programme at the health facility and hence end up doing multiple activities. A researcher has discovered that health facilities have opted to run PMTCT services in one of the two following ways:

- a) Delegate one or two staff members to run PMTCT services
- b) Involve every staff member at the facility to run PMTCT services

The health facilities which delegated one or two staff members to run the services – the participants explained that this approach ensures that there is someone who is very skilled, experienced and comfortable in running the PMTCT services and is always up to date with the National guidelines and normally receives much PMTCT training. He/she also acts as a focal person for the programme at the facility. This ensures the smooth running of a programme. The only problem with this approach, as explained by the participants, was when the responsible person was not at work; possibly he/she was on vacation, sick leave, or attending training, or a meeting or could even have resigned from work. Should this occur there would then be no one at the facility competent and comfortable enough to run the programme and clients could be referred back until the focal person returned.

The other facilities which decided to involve everyone in the programme – in this regard the participants explained that by using this approach there usually is in-service training where experienced and skilled health care workers teach the others how to run the PMTCT programme. The programme will be managed by the entire facility staff and at any time all staff members are able to render service to needy patients even if they don't have the extensive knowledge of a focal person. They are, however, afforded the chance of learning, asking and delivering services to patients.

A study done by Rujumba et al (2012) complemented the above findings of this study to the effect that for proper running of the PMTCT programme not only the number of health care workers have to be adequate to run the services, but also as long as they have been involved in delivering services they must obtain adequate training in order to update their knowledge and skills

5.8 Data Management

Almost all the sites rely on manual entry of data – through the use of registers, patient files and tally sheets. Relying only on manual data entry always hampers data management. The participants explained the problem with the manual data entry to effect that mainly data will not be accurate as there are several ways of collecting data. Some information would be in the registers, while some would be in the patient files and tally sheets. Most of the time, due to the work pressure, the health care workers neglect to compile this data – they thus end up having incomplete or scattered data.

Similar problems with data were identified by Sprague (2011) who showed that when the data are only entered manually it would then usually be of low quality and mostly not reflect the whole ART and PMTCT activities.

5.9 Available support from the clinic and health facilities.

Generally all health facilities are doing what is required to be done by a health facility – rendering support to patients and helping them overcome various PMTCT barriers. Clinics and health facilities in totality are providing health education, linking patients with other support groups, promoting couple counselling and follow-up, conducting outreach services and tracing defaulters.

Individually not all health facilities are doing all of the above as other necessary services and supports are absent at some of the health facilities; for instance they don't have a programme for tracing defaulters and no programme which links patients to the support groups. It was pointed out by participants that there is a need for health facilities to ensure that they implement and provide the adequate supports to their clients. In doing so they will play a major part in trying to minimize PMTCT barriers associated with socio-cultural factors.

5.10 List of recommendations

Findings of this study have shown that PMTCT programmes still face some socio-cultural and structural barriers. The common challenges found by this study are stated below:

Home delivery is one of the barriers to PMTCT programmes. Factors associated with home deliveries are distance from the health facility, lack of transport, financial difficulties, culture and beliefs, ignorance, ignorance regarding the expected date of delivery, failure to attend antenatal care services during pregnancy, and fast progression of labour.

Lack of male involvement severely hampers the PMTCT programme. Reasons for minimal or no male involvement include lack of knowledge/illiteracy, stigma, denial of HIV status, partner of a pregnant woman being the husband of someone else, fear of disclosing their HIV status, long waiting hours at the clinics and being at work or working outside the town.

Some pregnant mothers and mothers of new borns don't comply with their clinic appointment as well as taking of medications as prescribed and as a result introduce negative consequences to the PMTCT programme. Reasons for poor compliance to follow-up and taking of medications were: lack of knowledge, distance from the clinic, poverty, illiteracy and stigma associated with HIV/AIDS. Also the study found that the patients who are on AZT prophylaxis don't adhere properly to their medications than those who are on full HAART.

Stigma associated with HIV/AIDS and stigma towards formula feeding are the other challenges to PMTCT outcomes. Pregnant mothers won't go to the clinic for HIV counselling and testing due to fear of stigma. Mothers feared to give their babies the bottle milk because it has been associated with HIV status – so they fear to be stigmatized. Some mothers, in order to overcome stigma which is associated with bottle feeding, decided to come up with a hiding mechanism so that they can bottle feed their babies without being stigmatized. They pretended to have some breast medical conditions which prevent them from breast feeding.

Lack of a continued supply of drugs, especially Nevirapine, to some of the sites, shortage of staff and lack of staff training and retraining so that they could obtain new information and skills, were found as some of the structural barriers to the PMTCT programme.

Poor PMTCT and ARV's data control and monitoring to some of the sites are other structural factors which were identified by the study and they represent a setback to the PMTCT programme.

From the abovementioned study findings; in order to improve the PMTCT outcomes and achieve the target of zero new HIV infections, zero HIV/AIDS related deaths and zero stigmatization, the researcher wishes to recommend the following to the policy makers and all stake holders of the PMTCT and HIV/AIDS programmes:

- Increase awareness of HIV/AIDS and PMTCT programmes.
- Health education has to be provided by all key stakeholders and not only the hospital or health facilities. Dissemination of information has to be done at schools, churches, all gatherings, using media such as TV, radio, newspapers, etc.
- Programmes should be multi-sectoral: have to involve not only health care workers but also committed politicians, village headmen, traditional herbalists and also traditional birth attendants.
- Clinics have to conduct outreach services to ensure they cover all pregnant mothers and to ensure that they are all registered for ANC services.
- Clinics have to motivate about male involvement and have to create an environment where men will feel a clinic is friendly towards them, e.g. creating a space for men and also, if necessary in order to motivate them, their couple has to be seen first. Men themselves have to be committed and feel proud to be part of the programme. The most important intervention to motivate involvement of men is through health education and raising awareness on the importance of escorting their partners to attend ANC services, for HIV counselling and testing and to follow-up. Cultural belief that it is a sign of weakness if a man is also attending and escorting his partner to the clinic should be cleared up.

- Issues concerning HIV and stigma, as well as stigma associated with formula feeding, have to be cleared up through health education and disclosure. Much information is needed in order to combat stigma and also to empower people sufficiently to disclose their status to close family members. This will prevent unnecessary queries, e.g. “*why you are using the bottle milk instead of breast milk in feeding your child?*” Disclosure of HIV status will enable mothers to have full control of their infant feeding options as there will be no need to seek reasons to hide their HIV status due to bottle feeding.
- Recruitment of adequate staff members to the clinics for running of PMTCT services.
- All nurses have to be trained regarding PMTCT – due to the nature of their work they usually deal with PMTCT clients on a daily basis.
- For proper data management and for smooth running of the programme the sites need to have at least a computer if full computerization of all consulting rooms at the health facility is not possible. Also sites need a data clerk who will be responsible for controlling and managing data; data input, data output and the generating of reports
- Health facilities have to ensure that there are no PMTCT medications missing as far as they are available and being provided by the government. This can be achieved through the proper management and regular checking and ordering of medications.

5.11 Limitations of the study

The use of health care workers may not explain well about various PMTCT barriers which patients themselves are facing. The study interviewed health care workers on the basis of their experience and their views about various factors such as PMTCT barriers. The study could produce much better findings if patients themselves (pregnant mothers, mothers of new borns or any mother who was managed by a PMTCT programme) could be involved and hear their views about how programmes could be improved, as well as challenges they are facing or those which they faced while on PMTCT programmes.

Secondly the study's findings rely only on one researcher who is the interviewer and also record the findings in writing. Since health care workers feel uncomfortable about audio or video recording the findings of results are based merely on one researcher's interpretation of the responses – the use of at least two researchers would have solved this problem.

5.12 Conclusion

In conclusion the study has found that both socio-cultural and structural factors play a role as barriers to the PMTCT programme and hence its outcomes.

The study has found that home deliveries are still common practice in a number of communities in Rundu district and as a consequence impair the PMTCT programme. Lack of male involvement is another hindrance faced by the programme and men and the health facility have to find some measures to bring more men on board – as ANC is not just a women thing. Recruitment of new staff, review of current staff establishment and sending more health care workers for training and re-training, are important measures for the programme as currently health facilities are facing a severe shortage of human resources and heavy patients load.

Health facilities still need a better way of monitoring their data as they rely only on manual data entries which in most cases are likely to generate data of poor quality. Computerization of sites and employment of data clerks are needed for a proper data management.

Many sites are trying to implement some activities which would help to minimize and clear PMTCT barriers, e.g. health education to clear the myths of stigma and stigma associated with breastfeeding, encouragement of male involvement and disclosure, as well as the importance of attending early to ANC services.

Other services such as linking of patients to support groups, defaulter tracing and conducting outreach activities to cater for patients who live far from the health facilities have been awarded to some of the sites but they need to be more emphasized and strengthened.

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Appendix 1: Participant informed consent form



UNIVERSITEIT•STELLENBOSCH•UNIVERSITY
jou kennisvennoot • your knowledge partner

STELLENBOSCH UNIVERSITY HEALTH WORKERS' CONSENT FORM TO PARTICIPATE IN RESEARCH

Re: Factors influencing PMTCT outcomes at Rundu District, Namibia

You are asked to participate in a research study conducted by Mohamed Said, a student from the Africa Centre for HIV and AIDS and the Management Sciences Faculty at Stellenbosch University. The results of this study will contribute to the establishment of recommendations to improve the PMTCT programmes and also how to overcome some PMTCT barriers. You were selected as a possible participant in this study because you have been providing PMTCT services and also you are working at the facility which has been selected to be used in the study.

1. PURPOSE OF THE STUDY

The purpose of the study is to identify the social-cultural and structural factors which influence PMTCT outcomes in the Rundu district, in order to document and recommend possible solutions of counteracting the various PMTCT barriers and challenges so as to improve conditions for mothers and babies, clinic visits and taking of PMTCT medications before and after delivery, improving the outcomes of the babies born from HIV positive mothers in accordance with UNAIDS vision of Zero new infections, Zero Stigmatization and Zero HIV/AIDS related deaths and hence providing a guidance for PMTCT programme.

2. PROCEDURES

If you volunteer to participate in this study, we would ask you to be involved as follows:

Interview

A short interview by the researcher will be conducted with health care workers within the various facilities in the district, including Rundu State Hospital, all three Health centres and four main Clinics in the district. The participants will be the Medical Doctors, Nurses and Community counsellors who have been delivering the PMTCT/ ART services.

The interview will explore experiences and challenges facing the PMTCT programme and generate recommendations about improving the programme. The procedure will be confidential, conducted in the confidential place at your facility. This will take about 45 minutes of your time and at a time that has been identified as convenient.

3. POTENTIAL RISKS AND DISCOMFORTS

The purpose of the study is to identifying factors which are impeding the PMTCT programme and hence assist the facilities and the PMTCT programme on how to counteract the challenges faced and further reassurances will be provided if needed. There are no foreseen risks involved as the research will be between the researcher and health workers. The interview time will be determined by the interviewee and not the researcher so as to make sure that the study and the researcher do not cause unnecessary inconveniences. **You are assured that your level of performance could in no way be linked to your performance appraisal.**

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The research could assist the outlined health facilities and also the Ministry of Health and Social Services to strengthen the PMTCT delivery services as well as dealing with PMTCT barriers and as a result have better PMTCT outcomes, have zero new HIV infections and in the end directly benefit the community at large, the participants' families and the employees – for the work well done!

5. PAYMENT FOR PARTICIPATION

There will be no payment for participation. The study is completely voluntary and is dependent on their participation.

6. CONFIDENTIALITY

Any information that is obtained from this study that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of storing the data in my personal safe in my personal working place and will not be of public access. The data will be analysed alone privately and will only be captured on a personal computer with a password protection. No personal details/names will be required from you as the participant as this is an anonymous exercise. The information may also be examined by Stellenbosch University's Human Research Ethics Committee. The records will only be used by them in order to carry out their requirements concerning the study.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't wish to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Dr Mohamed Said at work, telephone: +26466265500 (during the day), Cell: +264813209300 (day and night), E-mail: mokitambi@yahoo.com or Mr Burt Davis (Study Leader) on tel 0218083707 (SA) or E-mail: burt@sun.ac.za

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, kindly contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at Stellenbosch University's Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to me..... by Eve Robinson in English. A translator..... was asked to explain in my own language sections that I could not understand. I am in command of this language..... and where necessary it was satisfactorily translated to me.

I..... was given the opportunity to ask questions and these questions were answered to my satisfaction. I am aware that the results of the study will anonymously be processed into a study report and that at any stage I can withdraw my consent and participation in the study.

I hereby consent voluntarily to participate in this study. I have been given a copy of this form.

Name of Subject/Participant

Name of Legal Representative (if applicable)

Signature of Subject/Participant or Legal Representative

Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ . He/she was encouraged and given ample time to ask me any questions. This conversation was conducted in English and a/no translator was used in this conversation. The conversation was translated into _____ by _____ .

Signature of Investigator

Date

Appendix 2: Interview schedule

Interview schedule for selected Health workers

Opening

After observation at the clinic on Health Care workers and patients, the researcher then will arrange an interview with Health Care workers at the hospital, Health centres and district main clinics.

At the hospital it will involve 2 doctors, 3 nurses and 2 community counsellor. At the 3 Health Centres the interview will involve 2 nurses and 1 Community Counsellor; while at the 4 main clinics of the district the interview will involve 1 nurse and 1 community counsellor.

The total number of participants will be 24. The participants will be asked to volunteer and then will be selected in preference of seniority – those who are more experienced with the programme.

During the interview the researcher will ask some questions about the participants working experience regarding the prevention of mother-to-child-transmission (PMTCT) programme and also their general view about the services rendered to the patients as well as challenges they are facing. Also the researcher will ask about their opinion and recommendations on how a programme can be improved for better PMTCT outcomes.

The interview should take about 30 to 45 minutes. The interview will be semi-structured, guided by the following questions

A. General working experience at the facility

1. What is your Cadre?

.....
.....

2. For how long have you been working at the Centre?

.....
.....

3. For how long have you been involved in the PMTCT or antiretroviral therapy (ART) programme?

.....
.....

4. Have you ever attended training on PMTCT?

If yes, can you mention the training?

.....
.....

5. Would you like more training on PMTCT?

.....
.....

B. Socio-cultural factors and PMTCT Outcomes

1. Are you normally receiving babies who are born at home? From your experience what are the reasons for home delivery?

.....
.....

2. Are men escorting their pregnant female partners to come for the ANC services especially during HIV counselling and testing? If not what are the reasons? (From your experience)

.....
.....

3. Are mothers who are receiving antiretroviral (ARV) prophylaxis or highly active antiretroviral therapy (HAART) for PMTCT coming regularly for their appointments? If not what are the reasons?

.....
.....

4. Are pregnant mothers receiving ARV prophylaxis or HAART for PMTCT taking their medicines as prescribed? If not what might be the reasons?

.....
.....

5. Do you think that the stigma in the community can make some mothers not come for HIV counselling and testing, as well as attending regular clinic visit? How are they overcoming the stigma? In your opinion what do you think is the best way to overcome the stigma?

.....
.....

6. How do patients feel when they formula-feed their babies? Is there any form of stigma or discrimination they experience from close family members and friends? From your experience what do mothers do to prevent stigma from formula feeding?

.....
.....

7. Is there any available support from the clinic which helps protect the patients from the abovementioned barriers?

.....
.....

8. In your opinion what else could be done to counteract the abovementioned socio-cultural barriers?

.....
.....

C. Health workers and the facility

1. Do you believe that there are more patients coming to your facility than the health workers can handle? How would you describe the patient load?

.....
.....

2. What are the clinics doing to ensure there is always enough staff to run the PMTCT services?

.....
.....

3. Are ARV medicines always available at your facility? What are the facilities doing to ensure the continuous availability of ARV medicines?

.....
.....

4. In your opinion what else can be done to improve the shortage of health workers, lack of PMTCT trainings and shortage of ARV medicines? (If you have experience of any)

.....
.....

D. Data Management

1. How many health workers (all cadres) are available per day to attend to patients during a particular clinic day?

.....
.....

2. How many patients approximately come to the clinic on a particular day? A) During a busy day? B) A less busy day?

.....
.....

3. Do you have a health information management system (HIMS) for providing PMTCT/ART services?

.....
.....

4. What can be done to improve the data management at the clinic?

.....
.....

E. Closing

1. Are there, any other matters regarding the PMTCT services you wish to emphasize?

.....
.....

2. If you have a chance of changing certain things for a PMTCT programme, what would you change?

.....
.....

3. From your experience what would you say are the most challenging factors in the PMTCT programme? And what would you recommend to improve the PMTCT programme and outcomes?

.....
.....

Appendix 3: Participants information sheet

Dear Respondent/Participant

Re: Factors influencing PMTCT outcomes in the Rundu district, Namibia

In partial fulfilment of the requirements of the Master of Philosophy degree in HIV/AIDS Management from the Africa Center for HIV/AIDS Management at Stellenbosch University, I am carrying out a study with the above title. The information you will supply is for academic purposes and will be treated with confidentiality. The purpose of the study is to identify factors which influence PMTCT outcomes in the Rundu district, in order to document and recommend the possible solutions of counteracting the various PMTCT barriers and challenges so as to improve the outcomes of the babies born from HIV positive mothers in accordance with UNAIDS vision of Zero new infections, Zero Stigmatization and Zero HIV/AIDS related deaths and hence providing a guidance for PMTCT programme.

By using the Interview guide I am going to ask you several questions concerning the factors which are influencing the PMTCT outcomes and also I would like to know your suggestions how best the programme could be improved.

The aim of the study is to develop the recommendations on how to counteract various socio-cultural and structural barriers and this can help the facility and the country at large on how to improve the outcomes of HIV exposed babies.

The study objectives are:

- To identify the patient and community socio-cultural factors influencing the PMTCT outcomes in the Rundu district
- To ascertain hospital and clinics structural factors which contribute to PMTCT outcomes in the Rundu district
- To analyse if the available PMTCT services are supporting the existing socio-cultural and structural PMTCT factors

- To provide guidance for better provision of PMTCT services and what could be done to reduce the abovementioned PMTCT barriers in the district and in the country as whole.

Please feel free to contact me should you have any questions or if you require clarification with regard to any matter. Thank you.

Yours sincerely


Mohamed Said

Cell: 0813209300

Mail: mokitambi@yahoo.com

Appendix 4: Study approval letters

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REPUBLIC OF NAMIBIA
MINISTRY OF HEALTH AND SOCIAL SERVICES

Private Bag 2094 RUNDU Namibia	Rundu Hospital Premises Rundu Namibia	Tel: 066-265500 Ext: 541 Fax: 066-255371
Enq: Dr. M.H. Wambugu	Ref:	8 th July 2013

OFFICE OF THE REGIONAL DIRECTOR-KAVANGO REGION

**The Course Coordinator/Lecturer
Africa Centre for HIV/AIDS Management
Stellenbosch University
P/Bag X1, Matieland 7602
RSA**

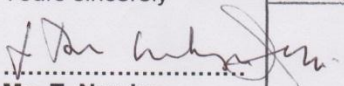
Att: Burt Davis

**Re: Permission to conduct research on HIV/AIDS in Rundu District Namibia by
Dr. Mohammed Said**

Reference is made to your letter dated 9th June 2013 on this subject matter. I am happy to inform you that, the Kavango Regional Health Directorate has no objection for Dr. Mohammed Said request to conduct his thesis proposed research on HIV/AIDS in Rundu District.

Dr. Mohammed is however expected to share his research findings and results with the Ministry of Health and Social Services at the end of his study.

Yours sincerely


Ms. T. Ngwira
Acting Regional Director

**MINISTRY OF HEALTH &
SOCIAL SERVICES**
PRIVATE BAG 2094
RUNDU NAMIBIA
08 JUL 2013
CHIEF MEDICAL OFFICER
REPUBLIC OF NAMIBIA

Forward with Health for all Namibians 2013



REPUBLIC OF NAMIBIA

MINISTRY OF HEALTH AND SOCIAL SERVICES

Private Bag 2094
RUNDU
Namibia
Enq: Ms R M Ndjengwa

Kavango Region
RUNDU
Namibia

Tel: 066-265500
Ext: 159
Fax: 066-255037
6th August, 2013

OFFICE OF THE PRINCIPAL MEDICAL OFFICER- RUNDU DISTRICT

Burt Davis (Lecturer)
Africa Centre for HIV/AIDS Management
Stellenbosch University
P/Bag X1, Matieland 7602
RSA

Dear Sir,

**RE: PERMISSION TO CONDUCT RESEARCH IN RUNDU DISTRICT BY DR.
MOHAMED SAID**

Refer to your letter of 9th June, 2013 concerning the above heading.

We concur with our Chief Medical Officer's and Regional Director's approval of the research to be conducted at our health facilities under our charge by Dr M Said. We have no objection to his conducting interviews with us, and we are still obliged to withdraw from the research if we feel uncomfortable.

We are equally looking forward to the researcher sharing his findings with us.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Godwin U. Chinweze', written over a horizontal dotted line.

Dr. Godwin U. Chinweze,
Principal Medical Officer

